





PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Bureau of Land Recycling and Waste Management

P.O. Box 8550  
Harrisburg, PA 17105-8550

OFFICIAL PENNSYLVANIA MANIFEST FORM

Form approved.  
OMB No. 2050-0039  
Expires 9-30-96

EP-LRWM51 REV. 11/95

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. PAD 046538211	Manifest Document No. 199082	2. Page 1 of 1	Information within the blue border is not required by Federal law but may be required by State law.	
3. Generator's Name and Mailing Address <b>Lyondell Chemical Company</b> 3801 West Chester Pike Newtown Square, PA 19073				A. State Manifest Document Number <b>DAE 6916696</b>		
4. Generator's Phone ( <b>610 359-4849</b> )				B. State Gen. ID <b>SAME</b>		
5. Transporter 1 Company Name <b>Crown Harbors Env. Service, Inc.</b>				C. State Trans. ID <b>PA-AH 0312</b>		
6. US EPA ID Number <b>PA D 039322-50</b>				D. Transporter's Phone <b>781 847-1800</b>		
7. Transporter 2 Company Name				E. State Trans. ID <b>PA-AH</b>		
8. US EPA ID Number				F. Transporter's Phone ( )		
9. Designated Facility Name and Site Address <b>Systech Environmental Corp.</b> 11397 Road 176 Paulding, OH 45879				G. State Facility's ID		
10. US EPA ID Number <b>OH D 005048947</b>				H. Facility's Phone ( )		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers	13. Total Quantity	
				No.	Type	
a. <b>RO. WASTE FLAMMABLE LIQUIDS, N.O.S. (ACETONE, ISOPROPANOL) (D001, P003, P005) (ERG 128), 3. UN1993, II</b>				<b>1</b>	<b>TT</b>	
				<b>5250</b>	<b>G</b>	
					<b>D001</b>	
					<b>P003</b>	
					<b>P005</b>	
					<b>JB</b>	
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above		
Lab Pack	Physical State	Lab Pack	Physical State	a.	c.	
a. <input type="checkbox"/>	<b>(I,T)</b>	<b>9188</b>	<b>JB</b>			
b. <input type="checkbox"/>		d. <input type="checkbox"/>		b.	d.	
15. Special Handling Instructions and Additional Information <b>11a AA61561 P005, D001, D022, D035, D038</b>						
<b>IN EMERGENCY, CALL CHES 1-800-645-8265</b>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name <b>THOMAS P BAKER</b>		Signature <i>Thomas P Baker</i>		MONTH DAY YEAR <b>08 24 99</b>		
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>Lawrence J. Geba</b>		Signature <i>Lawrence J Geba</i>		MONTH DAY YEAR <b>08 24 99</b>		
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		MONTH DAY YEAR		
19. Discrepancy Indication Space <b>Rec 9/8/99</b>						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.						
Printed/Typed Name <b>TERI J LECHE</b>		Signature <i>Teri Leche</i>		MONTH DAY YEAR <b>10 25 99</b>		

6916696

	CLEAN HARBORS #13	
	AUGUST 24,1999	
ISOPROPANOL (IPA)		40.6218%
ACETONE F003		36.8047%
WATER (H2O)		14.0424%
POLYOL		4.0539%
ALLYL PROPOXYLATE		1.0000%
OIL		0.4381%
PG / EG		0.3948%
HEXANE		0.3554%
T BUTYL ALCOHOL (TBA)		0.3075%
ISOOCTANE		0.2562%
HEPTANE		0.2500%
ETHYLBENZENE (EB) F003		0.1755%
TETRAHYDROFURAN (THF)		0.1738%
METHANOL F003		0.1516%
METHYL BENZYL ALCOHOL (MBA)		0.1043%
PROPYLENE OXIDE		0.0935%
ETHER F003 (ETHYL)		0.0901%
METHYL ETHYL KETONE (MEK) D035, F005		0.0811%
PYRIDINE D038		0.0660%
TOLUENE F005		0.0567%
ACETONITRILE		0.0518%
ARCOSOLVS		0.0497%
DISOBUTYLENE (DIB)		0.0494%
SULFURIC ACID (H2SO4)		0.0487%
ISOBUTYLENE		0.0471%
CHLOROFORM D022		0.0418%
METHYL T-BUTYL ETHER (MTBE)		0.0322%
ACETOPHENONE (ACP)		0.0282%
ACETIC ACID		0.0275%
GASOLINE		0.0242%
POTASSIUM HYDROXIDE (KOH)		0.0215%
HYDROCHLORIC ACID (HCL)		0.0146%
T BUTYL ACETATE		0.0142%
AMMONIA (NH4OH)		0.0126%
STYRENE		0.0100%
SODIUM HYDROXIDE (NaOH)		0.0048%
NITRIC ACID (HNO3)		0.0042%
METHYLENE CHLORIDE (MECL2) F002		0.0000%
PROPIONALDAHYDE		0.0000%
ETHANOL		0.0000%
TOTAL	PAE	100.00%
GALLONS		
MANIFEST #		
VAPOR RECOVERY	5 GALLONS	

THE HAZARDOUS WASTES IDENTIFIED ON THE HAZARDOUS WASTE MANIFEST IDENTIFIED ABOVE AND BEARING THE EPA HAZARDOUS WASTE CODES LISTED BELOW ARE RESTRICTED WASTES WHICH ARE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT UNDER THE LAND DISPOSAL RESTRICTIONS, 40 CFR PART 268 AND RCRA SECTION 3004(D). IN ACCORDANCE WITH 40 CFR 268.7(a), THE EPA WASTE CODE, WASTE SUBCATEGORY, AND TREATABILITY GROUPS, AS APPLICABLE, ARE INCLUDED BELOW.

**INSTRUCTIONS -- COMPLETE ALL SECTIONS. REFER TO PAGE 3 OF THIS FORM FOR KEY TERMS/DEFINITIONS.**

Column 1 - Line Item: Enter the manifest line item number (e.g., 11a) that corresponds to the waste code(s).

Column 2 - Waste Codes/Subcategory: Check off all applicable waste codes. For D001 through D043, also check applicable subcategory; for F001 through F005, check applicable constituents.

Column 3 - Wastewater/Non-wastewater: Check off "WW" for wastewater and "Non-WW" for non-wastewaters.

Column 4 - LDR Handling Code: Circle the appropriate handling code, as follows:

1 = The waste is a characteristic hazardous waste D001, D002, D003, D004-D011, or D018-43 which is intended for treatment/disposal in a CWA system, CWA-equivalent system, or Class I SDWA system. Underlying Hazardous Constituents (UHC's) are NOT required to be identified.

1A = The waste is a characteristic hazardous waste D001 High TOC Ignitable Liquids Subcategory (i.e., greater than or equal to 10% TOC). Pursuant to 40 CFR 268.40, the waste must be treated using organic recovery (RORGs) or combustion (CMBST) technology. UHC's are NOT required to be identified.

2 = The waste is a characteristic hazardous waste D001 (other than High TOC Ignitable Liquids), D002, D003 Explosive, Water Reactive or Other Reactive subcategory, D004-D011, D012-17 non-wastewater, or D018-43 which is intended for treatment/disposal in a non-CWA system, non-CWA-equivalent system, or non-Class I SDWA system located in the United States. All UHC's which are reasonably expected to be present must be identified, except for D001 waste that is intended to be treated using organic recovery (RORGs) or combustion (CMBST) technologies. Identify UHC's by completing Sections I and IV of CHI Form LDR-1 Addendum and attach completed Addendum to this form.

3 = The waste is a characteristic (i.e., D-code) or listed (i.e., F-, K-, U-, or P-code) hazardous waste which is intended for export and treatment/disposal at a facility located outside the United States. LDR treatment standards do not apply to hazardous waste treated/disposed in a foreign country, and per USEPA guidance, the identification of UHC's (if applicable) is not required for hazardous waste that is intended to be exported. Note however that if the exported waste is subsequently returned for treatment/disposal in the United States, all applicable LDR regulations would apply and a revised LDR notification would be required.

4 = The waste meets the definition of hazardous debris pursuant to 40 CFR 268.2(h) and is intended for treatment/disposal in compliance with the alternate debris treatment technologies of 40 CFR 268.45. In accordance with the requirements of 40 CFR 268.7(a)(1)(iv)(A): (1) "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45"; and (2) the contaminants subject to treatment (CSTT's) must be identified as part of this notification. Identify CSTT's by completing Sections III and IV of CHI Form LDR-1 Addendum and attach completed Addendum to this form.

5 = The waste is a characteristic waste D003 Reactive Sulfide, Reactive Cyanide, or Unexploded Ordnance subcategory, a characteristic waste D012-17 wastewater, or a listed (i.e., F-, K-, U-, or P-code) hazardous waste. UHC's are NOT required to be identified.

6 = The waste is a lab pack that is intended for incineration using the alternative lab pack treatment standard under 40 CFR 268.42(c). UHC's are NOT required to be identified; however, the generator must complete and attach the lab pack certification statement on CHI Form LDR-LP. Note that in accordance with 40 CFR Part 268 Appendix IV, lab packs which contain waste codes D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151 are not eligible for alternative lab pack treatment standard.

\*\*\* NOTE: IF THE WASTE IS A SOIL CONTAMINATED WITH A LISTED OR CHARACTERISTIC WASTE AND THE GENERATOR WANTS TO USE THE ALTERNATE TREATMENT STANDARD FOR SOILS, CONTACT CORPORATE COMPLIANCE FOR THE APPROPRIATE LDR NOTIFICATION FORM.

**SECTION 1. CHARACTERISTIC WASTES D001 THROUGH D043**

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
<u>11a</u>	<input type="checkbox"/> D001 Ignitables, except High TOC subcategory	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input checked="" type="checkbox"/> D001 High TOC Ignitable Liquids Subcategory (Greater than or equal to 10% TOC)	<input checked="" type="checkbox"/> Non-WW only	1A 3 6
	<input type="checkbox"/> D002 Corrosives	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> D003		
	<input type="checkbox"/> Reactive Sulfide, per 261.23(a)(5)	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 3 4 5 6
	<input type="checkbox"/> Reactive Cyanide, per 261.23(a)(5)	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 3 4 5 6
	<input type="checkbox"/> Explosive, per 261.23(a)(6), (7) & (8)	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> Water Reactive, per 261.23(a)(2), (3) & (4)	<input type="checkbox"/> Non-WW only	1 2 3 4 6
	<input type="checkbox"/> Other Reactive, per 261.23(a)(1)	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> Unexploded Ordnance, Emergency Response	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 3 4 5 6
	<input type="checkbox"/> D004 Arsenic	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> D005 Barium	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> D006		
	<input type="checkbox"/> Cadmium	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> Cadmium Containing Batteries	<input type="checkbox"/> Non-WW only	2 3 6
	<input type="checkbox"/> D007 Chromium	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> D008		
	<input type="checkbox"/> Lead	<input type="checkbox"/> WW <input type="checkbox"/> Non-WW	1 2 3 4 6
	<input type="checkbox"/> Lead Acid Batteries	<input type="checkbox"/> Non-WW only	2 3 6

SECTION I. CHARACTERISTIC WASTES D001-43 (CONTINUED)

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / NAME	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
	[ ] D009	[ ] WW [ ] Non-WW	1 2 3 4
	[ ] Low Mercury, less than 260 mg/kg Mercury	[ ] Non-WW only	2 3 4
	[ ] High Mercury Organic Subcategory	[ ] Non-WW only	2 3 4
	[ ] High Mercury Inorganic Subcategory	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D010 Selenium	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D011 Silver	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D012 Endrin	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D013 Lindane	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D014 Methoxychlor	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D015 Toxaphene	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D016 2,4-D	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D017 2,4,5-TP (Silvex)	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ] D018 Benzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D019 Carbon tetrachloride	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D020 Chlordane	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D021 Chlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
11A	[X] D022 Chloroform	[ ] WW [X] Non-WW	1 2 3 4 6
	[ ] D023 o-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D024 m-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D025 p-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D026 Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D027 1,4-Dichlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D028 1,2-Dichloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D029 1,1-Dichloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D030 2,4-Dinitrotoluene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D031 Heptachlor (and its epoxide)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D032 Hexachlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D033 Hexachlorobutadiene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D034 Hexachloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
11A	[X] D035 Methyl ethyl ketone	[ ] WW [X] Non-WW	1 2 3 4 6
	[ ] D036 Nitrobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D037 Pentachlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
11A	[X] D038 Pyridine	[ ] WW [X] Non-WW	1 2 3 4 6
	[ ] D039 Tetrachloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D040 Trichloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D041 2,4,5-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D042 2,4,6-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] D043 Vinyl Chloride	[ ] WW [ ] Non-WW	1 2 3 4 6

SECTION II. SPENT SOLVENT WASTES F001 THROUGH F005

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / CONSTITUENTS	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
11A	[ ] F001 [ ] F002 [X] F003 [ ] F004 [X] F005 [ ] WW [X] Non-WW		3 4 5 6
11A	[ ] 1. ALL F001-F005	11A [X]	25. Pyridine
	[X] 2. Acetone	[ ]	26. Tetrachloroethylene
	[ ] 3. Benzene	11A [X]	27. Toluene
	[ ] 4. n-Butyl alcohol	[ ]	28. 1,1,1-Trichloroethane
	[ ] 5. Carbon disulfide	[ ]	29. 1,1,2-Trichloroethane
	[ ] 6. Carbon tetrachloride	11A [X]	30. Trichloroethylene
	[ ] 7. Chlorobenzene	11A [X]	31. 1,1,2-Trichloro-1,2,2-trifluoroethane
	[ ] 8. o-Cresol	[ ]	32. Trichloromonofluoromethane
	[ ] 9. m-Cresol (difficult to distinguish from p-cresol)	11A [X]	33. Xylene - mixed isomers (sum of o-, m-, and p-xylene)
	[ ] 10. p-Cresol (difficult to distinguish from m-cresol)	[ ]	
	[ ] 11. Cresol - mixed isomers (sum of o-, m- and p-cresol)	[ ]	
	[ ] 12. Cyclohexanone	[ ]	
	[ ] 13. o-Dichlorobenzene	[ ]	
	[ ] 14. 2-Ethoxyethanol (F005 only)	[ ]	
	[ ] 15. Ethyl acetate	[ ]	
	[X] 16. Ethyl benzene	[ ]	
	[X] 17. Ethyl ether	[ ]	
	[ ] 18. Isobutyl alcohol	[ ]	
	[X] 19. Methanol	[ ]	
	[X] 20. Methylene chloride	[ ]	
	[X] 21. Methyl ethyl ketone	[ ]	
	[ ] 22. Methyl isobutyl ketone	[ ]	
	[ ] 23. Nitrobenzene	[ ]	
	[ ] 24. 2-Nitropropane (F005 only)	[ ]	

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SECTION III. CALIFORNIA LIST WASTES

COLUMN 1:  
LINE ITEM  
SEE MANIFEST

COLUMN 2:  
WASTE CODE / SUBCATEGORY

COLUMN 3:  
WASTEWATER/  
NON-WASTEWATER

COLUMN 4:  
HANDLING CODE

Hazardous waste containing one or more of the following  
California List constituents:

[ ] WW [ ] Non-WW

1 2 3 4 5 6

- [ ] ALL CALIFORNIA LIST CONSTITUENTS
- [ ] Liquids with nickel greater than or equal to 134 mg/l
- [ ] Liquids with thallium greater than or equal to 130 mg/l
- [ ] Liquids with PCB's > or = 50 ppm
- [ ] Waste containing HOC's > or = 1,000 mg/kg

SECTION IV. OTHER LISTED WASTES (F006-12, F019-F028, F037-38, F039, K-, U-, AND P-CODES)

COLUMN 1:  
LINE ITEM  
SEE MANIFEST

COLUMN 2:  
WASTE CODE / SUBCATEGORY

COLUMN 3:  
WASTEWATER/  
NON-WASTEWATER

COLUMN 4:  
HANDLING CODE

[ ] WW [ ] Non-WW

3 4 5 6

[ ] WW [ ] Non-WW

3 4 5 6

[ ] WW [ ] Non-WW

3 4 5 6

[ ] WW [ ] Non-WW

3 4 5 6

[ ] WW [ ] Non-WW

3 4 5 6

[ ] CHECK HERE IF ADDITIONAL LISTED WASTE CODES ARE PRESENT. COMPLETE AND ATTACH LDR-1 CONTINUATION SHEET.

[ ] CHECK HERE IF WASTE CODE F039 (MULTISOURCE LEACHATE) IS PRESENT. IDENTIFY F039 CONSTITUENTS BY COMPLETING SECTIONS II AND IV OF CHI FORM LDR-1 ADDENDUM AND ATTACH COMPLETED ADDENDUM TO THIS FORM.

SECTION V. CONTACT NAME AND DATE

Print Name:

THOMAS P. BAKER

Date:

8/24/99

KEY TERMS/DEFINITIONS

CLASS I SDWA SYSTEM means a Class I deep well facility regulated under the Safe Drinking Water Act (SDWA).

CWA SYSTEM means a centralized wastewater treatment facility discharging under a Clean Water Act (CWA) permit. For example, a CWA facility would treat organic or inorganic aqueous wastes and discharge the treated effluent to the local sewer system. Examples of CWA treatment systems owned and operated by Clean Harbors include the wastewater treatment operations at Baltimore (including the CES system), Bristol, Chicago, Cincinnati and Cleveland.

CWA-EQUIVALENT SYSTEM means a "zero discharge system" that engages in "CWA-equivalent" treatment before land disposal. Zero-discharge facilities treat hazardous wastes using "CWA-equivalent" treatment methods, but do not discharge the treatment effluent to a sewer or water body (e.g., spray irrigation land farm). "CWA-equivalent" treatment methods means biological treatment for organics, alkaline chlorination, or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

HIGH TOC IGNITABLE LIQUIDS SUBCATEGORY means an ignitable liquid hazardous waste (waste code D001) which contains greater than or equal to 10% total organic carbon (TOC). Pursuant to 40 CFR 268.40, such wastes must be treated using organic recovery (RORGs) or combustion (CMBST) technology. Examples of RORGs technologies include the CES unit at Clean Harbors of Baltimore. Examples of CMBST technologies include hazardous waste fuel blending and subsequent reuse at a cement kiln, or destruction at a RCRA incinerator.

WASTEWATERS are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS). [See 40 CFR 268.2(f)]